

### AMENDMENTS TO THE CLAIMS

The listing of claims replaces all prior versions and listings of claims. Only those claims being amended herein show their changes in highlighted form, where insertions appear as underlined text (e.g., insertions) while deletions appear as strikethrough text or text in double brackets (e.g., ~~deletions~~ or [[deletions]]).

1. **(Canceled)**
2. **(Currently Amended)** A method of monitoring method ~~a blood constituent~~ comprising the steps of:

determining a relationship between a ~~first biological property~~ blood constituent, a ~~second biological property~~ and a compensated measurement of said blood constituent;

reading a primary input in communication with a first device responsive to said ~~first biological property~~ blood constituent;

reading a parameter input in communication with a second device responsive to said ~~second biological property~~;

wherein said first device comprises an optical device and said second device comprises a non-optical device;

processing said primary input and said parameter input according to said relationship so as to ~~output~~ determine said compensated measurement of said blood constituent; and

causing said ~~an~~ output indicative of said compensated measurement of said blood constituent to be displayed.

3. **(Currently Amended)** A monitor comprising:
- a first input means in communication with a first device for determining ~~first biological property~~blood constituent values;
  - a second input means in communication with a second device for determining ~~second biological property~~ values;
  - wherein said first device comprises an optical device and said second device comprises a non-optical device;
  - a compensation means for determining a relationship between compensated measurement values of said blood constituent, said ~~first biological property~~blood constituent values and said ~~second biological property~~ values; and
  - a processor means for deriving a compensated measurement of said ~~first biological property~~blood constituent from said first input means, said second input means and said compensation means.
4. **(Currently Amended)** A monitor for compensating a first physiological property using a second physiological property, the monitor comprising:
- a primary input in communication with a first device ~~and responsive to~~configured to measure a first physiological property;
  - a parameter input in communication with a second device ~~and responsive to~~configured to measure a second physiological property; and
  - a processor configured to output said compensated measurement of said first physiological property from said primary input and said parameter input utilizing a compensation relationship between said primary input and said parameter input;
  - wherein said first device comprises an optical device and said second device comprises a non-optical device.
5. **(Previously Presented)** The monitor of Claim 4, wherein said first property is dependent upon said second property.
6. **(Previously Presented)** The monitor of Claim 4, wherein said first physiological property comprises blood oxygen levels.
7. **(Previously Presented)** The monitor of Claim 4, wherein said second physiological property comprises pH.

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8. **(Previously Presented)** The monitor of Claim 4, wherein said second physiological property comprises Hct.

9. **(Previously Presented)** The monitor of Claim 4, wherein said second physiological property comprises HbCO.

10. **(Previously Presented)** The monitor of Claim 4, wherein said second physiological property comprises MetHb.

11. **(Previously Presented)** The monitor of Claim 4, wherein said compensation relationship comprises a calibration curve.

12. **(Previously Presented)** The monitor of Claim 4, wherein the first device comprises an information element.

13. **(Currently Amended)** The monitoring method of Claim 2, wherein the step of determining a relationship further comprises determining a calibration curve based on the ~~second~~ biological property and wherein processing said primary input and said parameter input according to said relationship so as to output said compensated measurement further comprises using said calibration curve.

14. **(Currently Amended)** The monitoring method of Claim 2, wherein the step of determining a relationship further comprises determining a relationship between a ~~first biological property~~ the blood constituent, a ~~second~~ the biological property, a ~~the~~ compensated measurement and a previously obtained compensated measurement and wherein processing said primary input and said parameter input according to said relationship so as to output said compensated measurement further comprises processing said previously obtained compensated measurement.

15. **(Currently Amended)** The monitoring method of Claim 2, wherein the step of determining a relationship further comprises altering a calibration curve based on the ~~second~~ biological property and wherein processing said primary input and said parameter input according to said relationship so as to output said compensated measurement further comprises using said calibration curve.

16. **(Previously Presented)** The monitoring method of Claim 15, wherein altering comprises one or more of shifting, rotating, and modifying said calibration curve.

17. **(Currently Amended)** A monitor for compensating a first physiological property using a second physiological property, the monitor comprising:

a primary input in communication with a first device and responsive configured to measure a first physiological property;

a parameter input in communication with a second device and responsive configured to measure a second physiological property; and

a processor configured to output said a compensated measurement of said first physiological property from said primary input and said parameter input utilizing a compensation relationship between said primary input and said parameter input;

wherein said second physiological property comprises pH.

18. **(Previously Presented)** A monitor for compensating a first physiological property using a second physiological property, the monitor comprising:

a primary input in communication with a first device and responsive to a first physiological property;

a parameter input in communication with a second device and responsive to a second physiological property; and

a processor configured to output said compensated measurement from said primary input and said parameter input utilizing a compensation relationship between said primary input and said parameter input;

wherein said second physiological property comprises Hct.

19. **(Previously Presented)** The monitoring method of Claim 2, wherein said second biological property comprises pH.

20. **(Previously Presented)** The monitor of Claim 3, wherein said second biological property comprises pH.